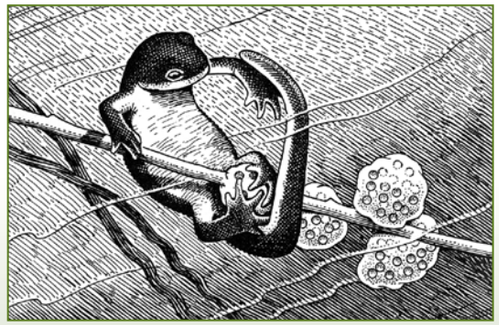
Anthony Fisher

arboreal salamander
(Aneides lugubris)

LENGTH: 2 ¼ - 4 inches.
This large salamander is grey or brown with very small specks of light cream or yellow all over the body. The head is wide, the jaw muscles very well-developed, and the eyes bulge slightly. This salamander is able to make a barking noise, which is rare in salamanders and they may bite. The arboreal salamander is found in woodlands and are great climbers. The eggs are laid on land, suspended from the top of a damp cavity in a tree, under a log, or underground, and are guarded by the adults.
FOOD: beetles, caterpillars, ants, centipedes, spiders, sowbugs, and slender salamanders.

The Amphibian Life Cycle:

The fascinating process of metamorphosis has been studied extensively. The dramatic changes during each life phase are often visible to the naked eye and allows us a glimpse into the world of cellular growth.



The California newt laying its eggs in water. (illustration by Robert C. Stebbins)

Further reading:

Petersen Field Guide to Western Reptiles and Amphibians,
Robert C. Stebbins.

A Natural History of Amphibians,
Stebbins and Cohen.

Text: Jessica Sheppard
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Design: Doyle Wegner, Exhibit Design

Cover: arboreal salamander (juvenile) and Pacific treefrog

Visitor Centers

ARDENWOOD HISTORIC FARM
Fremont (510) 796-0199
ardnwood@ebparks.org

BLACK DIAMOND MINES
Antioch (925) 757-2620
bdvisit@ebparks.org

COYOTE HILLS REGIONAL PARK
Fremont (510) 795-9385
chvisit@ebparks.org

CRAB COVE at CROWN BEACH
Alameda (510) 521-6887
ccove@ebparks.org

SUNOL REGIONAL WILDERNESS
Sunol (925) 862-2601
svisit@ebparks.org

TILDEN NATURE AREA/EEC and LITTLE FARM
Berkeley (510) 525-2233
tnarea@ebparks.org

This brochure is provided as a public service of the Interpretive and Recreation Department of the East Bay Regional Park District. For more information, call one of the visitor centers listed above.

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Amphibians of the Regional Parks

East Bay Regional Park District
www. ebparks.org

Amphibians of the Regional Parks

Amphibians are a familiar group of animals to most people. They are known for their double lives: in water and on land. Though all amphibians need moisture to survive, some of them complete their whole life cycle on land.

Winter and spring are the best times to see frogs and salamanders. Because they love the wet weather, a rainy day hike might be the only time to see a California newt walking on the path, or a Pacific tree frog hanging out on the vegetation.

Amphibian's skin is not covered with scales like reptiles, but is damp, and even slimy for some species. Salamanders often hide in or under logs and when the wood is collected as firewood, they make an attempt to escape. But, contrary to folklore, amphibians can't crawl unharmed through fire.

The frog life cycle begins when adult males sing at breeding sites to attract females. Eggs are fertilized in water. Tadpoles (pollywogs) hatch out and remain in water, breathing with gills. The change to adult form is called metamorphosis.

Salamanders have a similar life cycle, and need water to lay eggs. Some species only require damp spots under

Ensatina salamander with eggs.

rocks or logs to lay their eggs. Salamanders that hatch out in streams or ponds are aquatic just like tadpoles. These larvae have a tail for swimming, gills to breathe, and have four legs. They also go through metamorphosis and finally lose their gills and get oxygen from the air. In some species they grow lungs, others need only their skin to breath. At this stage they are sub-adults and will not breed until they are sexually mature. Salamanders are unique in their ability to regenerate both legs and tails when broken off. This allows them to escape predators, at a small cost.

Most amphibian larvae are aquatic and have different diets than the adults. The food items listed are for the adult.

The East Bay Regional Park District protects the open spaces for amphibians and other wildlife. Some areas outside the parks are threatened by development that destroys habitat for our native wildlife. We hope that you will join us in protecting both the animals and the habitats that support them by leaving some natural areas in your garden and not using pesticides or herbecides. Together we can ensure their survival for future generations to study and enjoy.

Frogs

Steve Bobzien

Pacific treefrog
(Hyla regilla)

LENGTH: 1-2 inches.
Previously called the chorus frog, our smallest native frog, possesses a big voice. Sometimes found in shrubs or trees, they can be green, brown, or golden tan but all have a dark stripe through the eye. They may change from light to dark in a matter of minutes, but the over-all color does not change. The underside is a pale cream with yellow on the hind quarters. Males have a wrinkled, dusky throat. Egg clusters of 5-10 eggs are usually attached to submerged vegetation enclosed in a loose, clear protective fluid. These diminutive frogs have the most common and familiar voice along the Pacific Coast, a loud two-parted sequence of "kreck-ek" that is repeated; often many will sing together in a lovely frog chorus.
FOOD: leafhoppers, flies, ants, beetles, and spiders.

foothill yellow-legged frog
(Rana boylii)

LENGTH: 1 ½ - 2 ⅞ inches.
Grey, brown, or olive on the back, usually plain but sometimes mottled. This stream-loving frog blends in well with its environment. The underside is light, the lemony-yellow legs give it the common name. The bright color continues up from the leg onto the belly. There may be a light triangle-shaped patch on the nose. Found near streams or rivers, the yellow-legged frog is quick to jump into the water to escape danger. The compact egg masses

Steve Bobzien

are deposited underwater, attached to stream substrate including small boulders and pebbles. The tadpoles are small and mature quickly. Since they vocalize underwater, the call of the male is rarely heard: a grating sound in one pitch, or rising at the end, lasting less than a second. They may call quickly several times in a row.
FOOD: grasshoppers, hornets, ants, flies, mosquitoes, water-striders, beetles, moths, and snails.

Steve Bobzien

bullfrog

(Rana catesbeiana)

LENGTH: 3 ½ - 8 inches.
These large olive-green frogs have become more common in the East Bay Parks. Not native to California, bullfrogs will eat anything they can catch, even other frogs that live here! They look similar to the smaller red-legged frog, but they do not have folds of skin down the back. However there is a fold of skin that goes from behind the eye, around the eardrum and down to the front leg. The eardrum is nearly as big as their large eyes. Bullfrogs compete with native wildlife for food and other resources, especially with the red-legged frog that has similar needs. Thousands of eggs are laid in a large raft floating in the water. The tadpoles take two years to mature into frogs. Bullfrogs have a deep voice that sounds like "jug-o-rum" or "br-wum", when surprised they may squawk as they jump into the water.
FOOD: a variety of insects, small fish, frogs, tadpoles, snakes, turtles, birds, mice, and some cannibalism.

Steve Bobzien

California red-legged frog

(Rana aurora draytonii)

LENGTH: 1 ¾ - 5 ¼ inches.
This large beautiful frog was listed as a Federally threatened sub-species in 1996. Often confused with the non-native bullfrog, our native species is slightly smaller and usually has a dark mask bordered by a light jaw stripe. They get their name from the red on the lower abdomen and underside of the back legs. Two long creases, or folds of skin run along the back, and are another key to identification. They have become more rare because of loss of habitat and also direct competition for food with the non-native, larger bullfrogs and exotic fish. Red-legged frog eggs are laid in a floating mass near or at the water's surface. Their call is more like a growl, a quiet series of "uh-uh-uh-uh-uh" with a "rowr" sometimes added on the end.
FOOD: insects (beetles), caterpillars, silver fish, salamanders, and small frogs.

Steve Bobzien

Western toad

(Bufo boreas)

LENGTH: 2 ½ - 5 inches.
It looks like a frog, but the skin is dry and bumpy. You won't get warts from handling them! There is a light colored stripe down the middle of the back, overall color is grey, tan or greenish with black splotches. The warts are poison glands which secrete a milky fluid that repels predators. The bumpy skin prevents drying out. Toads can absorb moisture through their thin skin on the underside, so finding moist areas is important to survival. They lay a string of eggs in shallow water. The toad's call is a low, mellow chirping like that of a peeping chick.
FOOD: flies, mosquitoes, grasshoppers, caterpillars, bees, moths, crayfish, sowbugs, snails, and spiders.

Salamanders

Steve Bobzien

California tiger salamander

(Ambystoma californiense)

LENGTH: 3 - 5 inches.
Black with yellow or cream colored spots or bands, this stocky salamander is increasingly rare in most of its historic range. Living in underground burrows of mammals for most of the year, the rainy season brings them out to find ponds or wetlands to breed. The adults are chiefly nocturnal and are active during or just after rains. Often their presence is not noticed until they are found dead on the roads that cross the migration routes. Eggs are laid in small clusters or singly in shallow water attached to vegetation.
FOOD: Earthworms, aquatic and terrestrial snails, insects, fish, amphibians, and small mammals.

Anthony Fisher

California slender salamander
(Batrachoseps attenuatus)

LENGTH: 1 ¼ - 1 ⅞ inches.
A small, thin salamander that appears legless, but by looking closer, you can see the tiny limbs. They have four toes on front and back feet, unlike other salamanders that have five toes on the hind feet. They are brown, black or reddish and are well-camouflaged. If disturbed they move quickly to wriggle away underground. The tail of this salamander comes off easily, providing a meal for a would-be predator and allowing the salamander to escape unharmed.
FOOD: earthworms, small slugs, snails, sowbugs, millipedes, mites, spiders, and small insects.

yellow-eyed salamander
(Ensatina eschscholtzii xanthoptica)

LENGTH: 1 ½ - 3 inches.
Also called Ensatina, this is a beautiful bright-colored salamander with reddish brown above, orange to pink on the underside. They are often confused with newts, but are much smoother and generally smaller, and the tail is constricted at the base. Eggs are laid underground, under bark, or within rotting logs in a grape-like cluster. The female protects them from being eaten or drying out.
FOOD: earthworms, sowbugs, millipedes, centipedes, spiders, and insects.

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California newt eggs

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California newt
(Taricha torosa)

LENGTH: 2 ¾ - 3 ½ inches.
The newt's rough skin separates them from other salamanders. Brown on the back, bright yellowish-orange on the belly, this common salamander uses its bright colors to let animals know it tastes terrible. They have a deadly poison in their skin and muscles that makes them safe from every animal except our common terrestrial garter snake. The newt can be found in grassland or woodland in the summer months, and migrates to ponds and streams for the rainy winter. The eggs are secured to underwater vegetation in a ball of rigid, clear jelly containing 5-20 eggs, but usually 10.
FOOD: earthworms, slugs, insects, and other invertebrates.

Joshua L.Puhn/The Salamander Wrangler website

rough-skinned newt
(Taricha granulosa)

LENGTH: 2 ¾ - 3 ½ inches.
This species is nearly identical to the California newt, but is even more poisonous. They are generally darker, have smaller eyes and a dark lower eyelid. They appear stockier and move more slowly than the other newt in our area. They also migrate to the ponds or streams to breed, though they may be found in ponds and streams throughout the summer. The eggs are laid singly on underwater sticks or plants.
FOOD: snails, earthworms, crustaceans, spiders, insects, and amphibian eggs.

salamander larvae